

Dynamics Behavior of DFIG Wind Energy Conversion System In case Dip Voltage

Authors : N. Zerzouri, N. Benalia, N. Bensiali

Abstract : During recent years wind turbine technology has undergone rapid developments. Growth in size and the optimization of wind turbines has enabled wind energy to become increasingly competitive with conventional energy sources. As a result today's wind turbines participate actively in the power production of several countries around the world. These developments raise a number of challenges to be dealt with now and in the future. The penetration of wind energy in the grid raises questions about the compatibility of the wind turbine power production with the grid. In particular, the contribution to grid stability, power quality and behavior during fault situations plays therefore as important a role as the reliability. In the present work, we addressed two fault situations that have shown their influence on the generator and the behavior of the wind over the defects which are briefly discussed based on simulation results.

Keywords : doubly fed induction generator (DFIG), wind energy, grid fault, electrical engineering

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020